

A question of identification

At a recent urology convention, physicians correctly identified 7 out of 10 of these photomicrographs.



*45th Annual Convention, American Urological Association, North Central Section, Detroit, September 22-25, 1971.

- ☐ Calcium oxalate crystals.
- ☐ Squamous epithelial cells.
- ☐ Red blood cell cast.
- ☐ Clusters of white blood (pus) cells.

Score yourself.

Answers appear below.

- ☐ Epithelial cells.
- ☐ E. coli, fluorescent stain.

- ☐ P. mirabilis, flagella stain.
- ☐ Calcium carbonate crystals.
- ☐ Crenated red blood cells.
- ☐ Malignant cells.

And when susceptible *E. coli* is identified, start with Gantanol® (sulfamethoxazole)

Gantanol (sulfamethoxazole) is dependable, basic therapy for patients with nonobstructed acute, recurrent or chronic urinary tract infections; i.e., pyelonephritis or cystitis.

Effective control of primary bacterial offenders

Susceptible *E. coli*, the most common cause of initial urinary tract infections, can be effectively controlled by Gantanol. Its antibacterial spectrum also includes susceptible urinary pathogens such as *Klebsiella-Aerobacter*, *Staph. aureus*, *Proteus vulgaris* and *Proteus mirabilis*.

Prompt antibacterial blood and urine levels—in from 2 to 3 hours

Therapeutic blood/urine levels are reached rapidly, usually in from 2 to 3 hours after the initial 2-Gm adult dose, then maintained easily with Gantanol Tablets or the pleasant-tasting Gantanol Suspension.

Effective in chronic infections

The elderly and debilitated not uncommonly develop nonobstructed chronic or recurrent pyelonephritis or cystitis—which sometimes is difficult to eradicate. Often these infections, when due to susceptible organisms, can be controlled with Gantanol.

12 hours of therapy with every dose

Either dosage form of Gantanol given b.i.d. yields up to 12 hours of antibacterial activity...the around-the-clock coverage your patients need. Symptomatic improvement often comes 24 to 48 hours after the start of therapy. Gantanol, on proper dosage schedule, is generally well tolerated, with relative freedom from complications. However, the usual precautions during sulfonamide therapy should be observed, including maintenance of adequate fluid intake, frequent c.b.c.'s and urinalyses with microscopic examination. It should be noted that the increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents, including sulfonamides, especially in chronic or recurrent u.t.i.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in acute, recurrent or chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) and in the absence of obstructive uropathy or foreign bodies. **Contraindications:** Sulfonamide hypersensitivity; infants less than 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis); pregnancy at term and during nursing period.

Warnings: Safe use in pregnancy has not been established. Sulfonamides have not been shown to be teratogenic. Sulfonamides have not been shown to be carcinogenic. Sulfonamides have not been shown to be mutagenic. Sulfonamides have not been shown to be teratogenic. Sulfonamides have not been shown to be carcinogenic. Sulfonamides have not been shown to be mutagenic.

Adverse Reactions: Blood dyscrasias: agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; allergic reactions: erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, anaphylactoid reactions, pruritus, exfoliative dermatitis, and other allergic reactions; gastrointestinal reactions: nausea, vomiting, diarrhea, constipation, and other gastrointestinal reactions.

emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; C.N.S. reactions: headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; and miscellaneous reactions: drug fever, chills, toxic nephrosis with oliguria and anuria, periarthritis nodosa and LE phenomenon. Due to certain chemical similarities with some hypoglycemic agents, sulfonamides have caused rare instances of hypoglycemia, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age, except adjunctively with pyrimethamine in congenital toxoplasmosis. Usual dosage is as follows:

Adults: 2 Gm (4 tabs or teasp.) initially, then 1 Gm (2 tabs or teasp.) b.i.d. or i.i.d. depending on severity of infection. **Children:** 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, followed by 0.25 Gm/20 lbs (½ tab or teasp.) b.i.d. Maximum dose for children should not exceed 75 mg/kg/24 hrs. **Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

Answers: 1. Squamous epithelial cells. 2. Calcium oxalate crystals. 3. Epithelial cells. 4. Red blood cell cast. 5. E. coli, fluorescent stain. 6. Calcium carbonate crystals. 7. Malignant cells. 8. Crenated red blood cells. 9. Clusters of white blood (pus) cells. 10. P. mirabilis, flagella stain.

In nonobstructed urinary tract infections due to susceptible organisms

Gantanol B.I.D. (sulfamethoxazole) Tablets/Suspension Basic therapy

Roche Laboratories Division of Hoffmann-La Roche Inc. Nutley, N.J. 07110

Medical Tribune

and Medical News

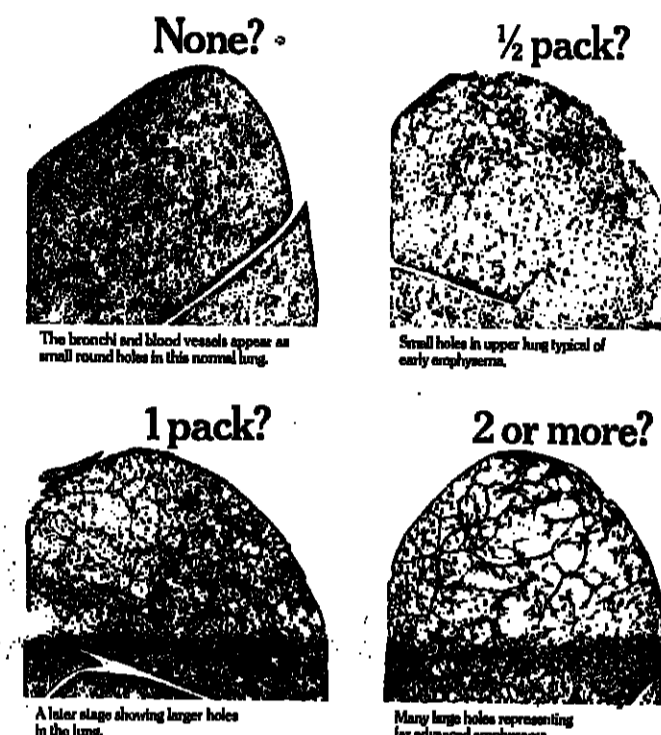
world news of medicine and its practice—fast, accurate, complete

Wednesday, November 22, 1972
Vol. 13, No. 45

These... Are... Your... Lungs...

Show this to the patient who can't see what's so bad about smoking:

How much do you smoke?



Photos of whole lung sections show changes of pulmonary emphysema as related to smoking habits. Auerbach, O., et al. Relation of smoking and age to emphysema. New Eng J Med 286:853-7, 1972.

Doctor, if a thousand words have failed, try a picture. A copy of this is yours for the asking.

Write Smoking and Emphysema, HEW, Rockville, Maryland 20852

Here's how you can show your patient graphically what cigarette smoking will do to his lungs. The 8 x 10-inch poster above, prepared by the Public Health Service, shows the stepwise worsening of emphysema as the smoker increases his chronic daily use of cigarettes. Designed as a service to the profession to help educate patients in the hazards of smoking, the poster is available to physicians free of charge. It comes with explanatory material based on the pathologic and epidemiologic studies of Dr. Oscar Auerbach, of the Veterans Administration, and E. Cuyler Hammond, Sc.D., of the American Cancer Society. Write for your free copy to Poster, MEDICAL TRIBUNE, 880 Third Avenue, New York, N.Y., 10022.

'Cure' Is Held Possible In Most Child Sarcomas

Medical Tribune Report

LOS ANGELES—Management of soft-tissue sarcomas in children has reached the point where "cure" can be accomplished in many, if not most, cases, providing the cancers are diagnosed early enough, the seventh National Cancer Conference was told here.

Detailing "great progress" in the treatment of soft-part sarcomas, the third commonest group of solid tumors in children, Dr. Philip R. Exelby, of New York's Memorial Hospital for Cancer and Allied Diseases, said that fibrosarcoma management now has an "expected cure rate of about 90 per cent" with surgery alone, and rhabdomyosarcoma a cure rate of 60 per cent.

Toronto Study On Vitamin C Backs Pauling

Medical Tribune Report

TORONTO—The results of a large double-blind trial have completely removed the doubts of a team of Canadian investigators regarding Dr. Linus Pauling's claims that vitamin C gives therapeutic protection against the common cold, a member of the team, Dr. T. W. Anderson, Associate Professor of Epidemiology and Biometrics at the University of Toronto, told MEDICAL TRIBUNE.

"We were skeptical of Dr. Pauling's claims when we started the trial," he said, "but the results of the study have made that skepticism disappear."

Dr. Anderson stated, however, that while "a firm recommendation" on the use of large doses of ascorbic acid in the prevention and treatment of colds cannot be made until certain questions are answered, "the results of our trial have encouraged us to conduct an even larger trial this winter to seek the answers to those questions."

He stressed that this does not mean treatment is "any less radical" than hitherto. Continued on page 20

Tuskegee Study End Immediately Urged By Citizens' Panel

Medical Tribune Report

WASHINGTON—An immediate termination of the Public Health Service's 40-year-old Tuskegee syphilis study was recommended here by a nine-member citizens' panel set up to investigate the study.

And Dr. Merl K. DuVal, HEW assistant secretary for health and scientific affairs, said the recommendation would be implemented "as rapidly as possible."

Dr. DuVal also backed panel recommendations that the surviving participants in the study receive any necessary medical care and that a Select Specialists Group be appointed to supervise treatment.

The probe of the Tuskegee study followed disclosures that the majority of 412 syphilitic black male participants had not been treated even after penicillin was found to be an effective cure. Approximately 75 are still alive.

PHS maintained "a continuous policy" Continued on page 19

San Antonio Diphtheria: Surprises, Dilemmas

Medical Tribune Report

When diphtheria struck San Antonio, Tex., clinically it held surprises—and dilemmas.

A yellow pharyngeal membrane? Diphtheria? But diphtheria is supposed to be distinguished by a greenish membrane.

"If I had seen these cases in the emergency room when I was in Denver I would never in my life have thought it was diphtheria," states Dr. Jerry J. Eller, head of pediatric infectious disease, University of Texas Medical School at San Antonio.

Yet during the 1970 diphtheria epidemic in San Antonio, a yellow membrane was a presenting sign in many patients who came to the affiliated Bexar County Hospital with what turned out to be diphtheria. And therapy in this life-threatening disease rests on the clinical diagnosis. It still is a sign, during the winding down of the epidemic.

"We all learned a great deal clinically," states Dr. Richard V. McCloskey, then head of infectious diseases. "We began to pick up the disease very early and to anticipate complications."

Dr. McCloskey and Eller collaborated

in the care of all diphtheria inpatients in Bexar County Hospital—connected by a third-floor ramp to the medical school. "Disciplinary lines became blurred," says Dr. McCloskey. Although he was in the department of medicine and Dr. Eller in

No. 3: Infection Control Series

the department of pediatrics, they together worked out the management protocol for both the children and the adults who besieged the hospital with diphtheria. They frequently consulted on "results of cultures, how many family members of so-and-so we didn't get treated, how so and so is doing, what we should do with so-and-so," Dr. McCloskey relates. The hospital's isolation unit in medicine—on the 10th floor—that Dr. McCloskey headed accommodated older children from the overflowing special diphtheria ward set up in pediatrics—on the fifth floor.

"The membrane," Dr. McCloskey learned, "may be small." Nausea, vomiting, headache, and chills were among the presenting complaints even in those in

whom the lesion was not extensive. Dyspnea was a symptom in several children and in one adult with "an extremely exuberant membrane." Dysphagia was frequent—although "many physicians would put severe pain upon swallowing as a very uncommon symptom of diphtheria." Several patients were prostrated on admission.

"The spectrum of the disease is very wide—on the one end a local infection that is entirely asymptomatic and on the opposite end a devastating disease that progresses relentlessly and kills by destroying heart muscle and/or obstructing respiration."

Sometimes at admission "the child is coughing up blood and chunks of membrane dislodged by the coughing, is short of breath and exhausted."

Another observed phenomenon in San Antonio was a unilateral or bilateral swelling localized in the upper portion of the neck, with the area "looking as if someone had erased the anatomic boundaries." The "erasure edema"—the description coined Continued on page 12



It may be just a mild depression. But she needs help...and needs it right now. Counsel and reassurance may suffice. But if you decide supportive medication is indicated, Ritalin can

offer prompt benefit. No need to wait days or weeks to begin feeling better. Ritalin improves mood and outlook, helps the patient get moving again.

Ritalin is generally well tolerated, even by older or convalescent patients. And there's generally no need for long-term therapy. When Ritalin works, one prescription may be sufficient.

Ritalin
(methylphenidate)
helps overcome the inertia
of mild depression*

*has been evaluated as possibly effective for this indication. See brief summary.

Ritalin® hydrochloride
(methylphenidate hydrochloride)
TABLETS

INDICATION
Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indication as follows:
"Possibly" effective: Mild depression
Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS
Marked anxiety, tension, and agitation. Also contraindicated in patients known to be hypersensitive to the drug and in patients with glaucoma.

WARNINGS
Ritalin is not recommended for children under 6 years of age, since safety and efficacy in this age group have not been established. Since sufficient data on safety and efficacy of long-term use of Ritalin in children with minimal brain dysfunction are not yet available, these requiring long-term therapy should be carefully monitored.

Ritalin should not be used for severe depression of either exogenous or endogenous origin or for the prevention of normal fatigue states.

Ritalin may lower the convulsive threshold in patients with or without prior seizures, with or without prior EEG abnormalities, even in the absence of seizures. Safe concurrent use of anticonvulsants and Ritalin has not been established. If seizures occur, Ritalin should be discontinued.

Use cautiously in patients with hypertension.

Drug Interactions
Ritalin may decrease the hypotensive effect of guanethidine. Use cautiously with other pressor agents, and MAO inhibitors. Ritalin may inhibit the metabolism of coumarin anticoagulants, anticonvulsants (phenytoin, diphenhydantoin, primidone), phenothiazines, and tricyclic antidepressants (imipramine, desipramine). Downward dosage adjustment of these drugs may be required when given concurrently with Ritalin.

Usage in Pregnancy
Adequate animal reproduction studies to establish safe use of Ritalin during pregnancy have not been conducted. Therefore, until more information is available, Ritalin should not be prescribed for women of childbearing age unless, in the opinion of the physician, the potential benefits outweigh the possible risks.

Drug Dependence
Ritalin should be given cautiously to emotionally unstable patients, such as those with a history of drug dependence or alcoholism, because such patients may be prone to abuse the drug.

Chronic abuse can lead to marked tolerance and psychic dependence with varying degrees of abnormal behavior. A rank psychotic episode can occur, especially with concurrent abuse. Careful supervision is required during drug withdrawal, since severe depression as well as the effects of chronic overuse can be unmasked. Long-term follow-up may be required because of the patient's basic personality disturbance.

PRECAUTIONS
Patients with an element of agitation may react adversely; discontinue therapy if necessary.

Periodic CBC and platelet counts are advised during prolonged therapy.

ADVERSE REACTIONS
Nervousness and insomnia are the most common adverse reactions but are usually controlled by reducing dosage and omitting the drug in the afternoon or evening.

Other reactions include: hypersensitivity (including skin rash, urticaria, fever, arthralgia, exfoliative dermatitis, and erythema multiforme with histopathological findings of necrotizing vasculitis); anorexia; nausea; oligomenorrhea; palpitations; headache; dizziness; dry mouth; increased blood pressure and pulse changes, both up and down; tachycardia; angina; cardiac arrhythmias; abdominal pain; weight loss during prolonged therapy. In children, loss of appetite, abdominal pain, weight loss during prolonged therapy, insomnia, and tachycardia may occur more frequently. Toxic psychosis has been reported.

DOSEAGE AND ADMINISTRATION
Adults

Administer orally in divided doses 2 or 3 times daily, preferably 30 to 45 minutes before meals. Dosage will depend upon indication and individual response. Average dosage is 20 to 30 mg daily. Some patients may require 40 to 60 mg daily. Others, 10 to 15 mg daily will be adequate. The few patients who are unable to sleep if medication is taken late in the day should take the last dose before 6 p.m.

HOW SUPPLIED
Tablets, 20 mg (pink, scored); bottles of 100 and 1000.
Tablets, 10 mg (pink, scored); bottles of 100, 500, 1000 and Strip Dispensers of 100.
Tablets, 5 mg (pink, scored); bottles of 100, 500, and 1000.

Consult complete product literature before prescribing.

CIBA Pharmaceutical Company
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Summit, New Jersey 07901

CIBA

Wednesday, November 22, 1972

MEDICAL TRIBUNE

5

What's new and important in treatment of gout?



The Consultant

DR. JOHN H. TALBOTT
Clinical Professor of Medicine,
University of Miami School of Medicine,
Miami, Fla.

THE DEVELOPMENT of allopurinol nearly a decade ago provided another highly useful drug in the antigout category which makes this disease the most satisfactory to treat of the several common types of joint disease.

The probability that phosphoribosyl transferase deficiency might play a role in the etiology of gouty arthritis has not been substantiated. The search for another enzyme deficiency associated with increased uric acid production seems unlikely but should not be dismissed.

The use of home dialysis or kidney transplantation in a patient with advanced renal insufficiency and gouty arthritis has been life-maintaining in a few instances.

A continued concentration of interest in the metabolism and renal exchange of uric acid is expected, as well as the search by the pharmaceutical industry in perfecting newer drugs for the control of hyperuricemia or the management of acute gouty arthritis. I wish I could be as hopeful in other joint diseases, particularly rheumatoid arthritis.

How should one go about differentiating between primary and secondary hyperuricemia? When should the diagnosis of gout be made?

The answer to the second part of the question is much easier than the first. A diagnosis of gouty arthritis should not be made in the absence of at least one typical attack of acute arthritis in one or more of the peripheral joints of the body. A relatively high incidence of the first acute attack in the great toe remains a clinical axiom. Clearly, one may observe acute attacks of gouty arthritis in the back, the hips, the shoulders, or the cervical spine, but these joints are affected only after the diagnosis has been well established for years and after many attacks in the toes, ankles, knees, hands, or elbows.

In searching for a diagnosis at the time of an initial attack of unexplained arthritis, the identification of urate crystals either free in the synovial fluid or engulfed within cellular elements plus a satisfactory response to a full course of colchicine 5-6 mg. over a period of 10-12 hours is most helpful. Most other antiarthritic or anti-inflammatory agents are nonspecific. They may or may not provide relief similar to colchicine, but if relief occurs it must be attributed to a nonspecific action of the drug. The action of colchicine in acute gouty arthritis is specific.

In addition to the characteristic clinical features of an acute attack of gout (sudden onset of acute pain, usually in a peripheral joint in a male, with the cardinal signs of inflammation, redness, swelling, heat, and pain), a satisfactory response to a full course of colchicine, the demonstration of hyperuricemia, a family history of

uricemia associated with a blood dyscrasia, such as polycythemia vera, myelofibrosis, or one of the leukemias, most likely is secondary. Also the development of hyperuricemia following the administration of a number of drugs notable in this category are the thiazides, pyrazinamide, furosemide, ethacrynic acid, and possibly levodopa. The development of hyperuricemia in a relative of a gouty family may be presumed to be primary.

When should primary hyperuricemia be treated with uricosuric agents or allopurinol if there has been no episode of arthritis?

There are several critical categories that probably should receive prophylactic therapy. A young male under the age of 30 with a strong family history and a serum uric acid above 9 mg. (assuming the lower limits of the gouty begin at 7.5 mg.) should receive probenecid 0.5 Gm. daily. All persons with uric acid above 10 mg. confirmed on two or more examinations or a chronic urate stone former should receive 100-200 mg. of allopurinol daily. Stone formers and those receiving probenecid should be cautioned regarding a liberal fluid intake to ensure a liberal urine output.

Next Week

- When hyperuricemia in a gouty patient has been brought down to normal levels, is it advisable to discontinue prophylactic colchicine?
- Now that several agents are available to treat gouty arthritis, how do you rank them?

When should secondary hyperuricemia be treated with uricosuric agents or allopurinol if there has been no episode of arthritis?

A patient with leukemia and secondary hyperuricemia should receive 200-400 mg. of allopurinol daily in the absence of an attack of arthritis. A modest hyperuricemia from one of the other blood dyscrasias or hyperuricemia following thiazide therapy should receive probenecid 1.0 Gm. and colchicine 1 mg. daily and a liberal fluid intake.

If an acute attack of gouty arthritis develops in a patient receiving thiazide but not on antigout drugs, the patient may continue his thiazides without compromise and should suffer no inconvenience from acute attacks of gouty arthritis if the prophylactic regimen is started.

Continued in next issue.

Doing little things better



caring better for his basic needs, less confused in his thinking; no great accomplishment for most people, but a significant advance for the arteriosclerotic patient with cerebrovascular insufficiency

Hydergine®

SUBLINGUAL TABLETS containing 0.167 mg. dihydroergocornine methanesulfonate, 0.167 mg. dihydroergocristine methanesulfonate, and 0.167 mg. dihydroergokryptine methanesulfonate

helps patients with cerebrovascular insufficiency due to arteriosclerosis do little things better

The usual dosage is four to six sublingual tablets daily. The patient's improvement with Hydergine is usually demonstrated in four to six weeks. Some nasal stuffiness due to adrenergic blockade, transient nausea or gastric disturbances have been reported with high dosages.



SANDOZ PHARMACEUTICALS, EAST HANOVER, N.J. 07936 SANDOZ 72-428

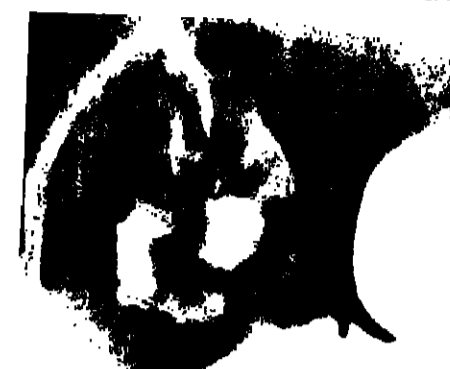
COMING NEXT ISSUE

- **Atherosclerosis**
Guidelines advanced for identifying child at high risk.
- **Cirrhosis of liver**
New technique controls bleeding of esophageal varices.
- **Bronchitis**
Smoking plays greater role than dust exposure in miners.

Excessive Anxiety in the Duodenal Ulcer Patient...

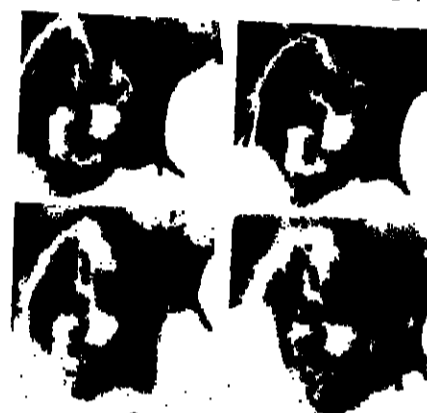
The Somatic Protest

The contributory role of anxiety in the pathogenesis and exacerbation of peptic ulcers is well established. Thus, excessive emotional tension and anxiety are believed to cause adverse changes in the physiology of the stomach or duodenum.



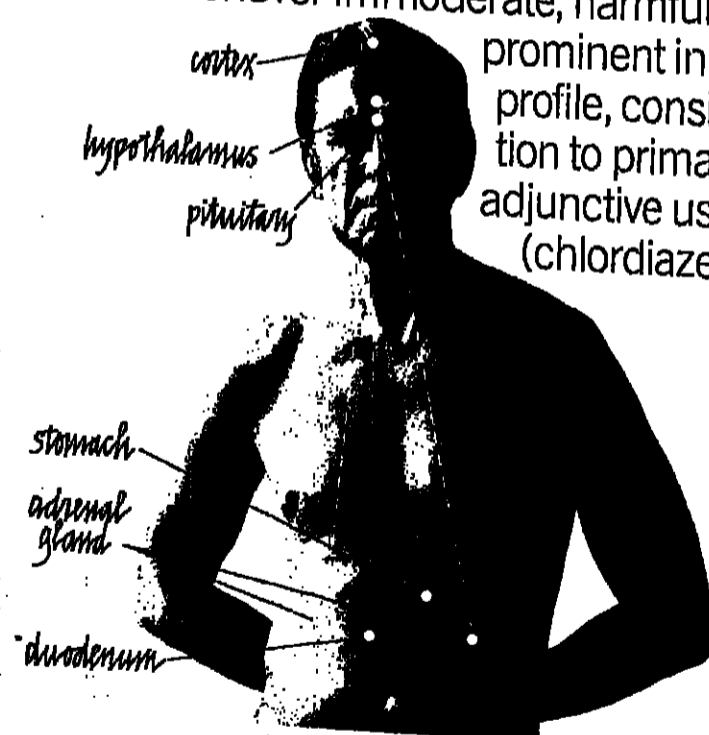
Large ulcer in the midportion of the duodenum wall demonstrated on spot film

Although the exact mechanism of these changes remains to be elucidated, it appears probable that the central nervous system as well as its chief neural and humoral outflows are involved. In many patients with duodenal ulcer, gastric hypersecretion and intestinal hypermotility are the end-organ manifestations of these processes and usually give rise to the typical symptoms of duodenal ulcer.



Compression spot films of duodenum

Whenever immoderate, harmful anxiety is prominent in the clinical profile, consider—in addition to primary therapy—the adjunctive use of Librium (chlordiazepoxide HCl) to



Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g.,

operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical

reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG

patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

For moderate to severe anxiety adversely affecting gastrointestinal function

adjunctive
Librium® 10 mg
(chlordiazepoxide HCl)
1 or 2 capsules t.i.d./q.i.d.

SURGICAL NOTES

The following notes are from reports presented at the 38th annual clinical congress of the American College of Surgeons, held in San Francisco.

Ischemic Leg Scanning

Scanning with radioactive microspheres for predicting the potential for healing in an ischemic leg was described by investigators at Johns Hopkins University School of Medicine.

The procedure is based on the premise that microspheres labeled with technetium-99m injected into the femoral artery are distributed to the distal capillaries in direct proportion to the blood flow, which can be quantitated by gamma counting scans. The ratio of counts bordering a lesion to counts 2-3 cm. away represents the patient's ability to develop hyperemia—"an essential part of inflammation and healing," they said.

Of 21 patients whose limbs were in jeopardy, 13 demonstrated hyperemia in the area of ischemic lesions and all healed with conservative therapy. The other eight showed no increase in blood flow and seven had nonhealing or rapid progression of the lesion.

The authors were Drs. Timothy J. Gardner and N. David Greyson, Buck A. Rhodes, Ph.D., and Dr. G. Melville Williams.

Extensive Liver Disease

Oxygen needs should be considered in the management of patients with extensive liver disease or injury, according to Drs. Theodore R. Schrock and Thomas K. Hunt, of the University of California School of Medicine, San Francisco, who reported a study demonstrating that hypoxia impairs regeneration of the injured liver in rats.

The animals were subjected to 68 per cent hepatectomy and placed in a chamber with the desired amount of oxygen. Hypoxia, it was found, depressed DNA synthesis. Animals on 8 per cent O₂ became severely acidotic and 67 per cent died. Those breathing 12 per cent O₂ developed no acid-base abnormalities, and none died.

Dog Heart Transplant

Successful orthotopic transplantation of canine hearts after in vitro preservation for 24 to 28 hours was reported by investigators at the National Heart and Lung Institute, Bethesda, Md. Heretofore, they noted, success has been rare in hearts preserved more than 12 hours.

The hearts were preserved by hypothermic perfusion with an oxygenated electrolyte solution resembling extracellular fluid. All of seven consecutive recipients survived for 30 hours or more, and three of these dogs survived to rejection.

The authors were Drs. Jack G. Cope-land, Michael Jones, Roger Spragg, and Edward B. Stinson.

Hepatic Surgery Eased

The carbon dioxide laser shortens the time of hepatic surgery and decreases morbidity, according to animal studies reported by Cincinnati investigators.

Dogs were heparinized and underwent partial hepatic lobectomy to control hemorrhage produced by simulated blunt trauma. Liver incisions were made by the cold knife, the Bovie electrosurgical scalpel, or a focused high-output carbon dioxide laser scalpel. The laser showed superior hemostatic capabilities both in the speed of coagulation when compared to the cold knife and in total blood loss when compared to both the electrosurgical unit and the cold knife.

The investigators were Drs. James P. Fidler and Richard W. Hofer, Thomas G. Polanyi, Ph.D., Herbert C. Bredemeier, and Drs. Vinton E. Sifer (deceased) and William A. Altmeier.

Limit on Surgery to Certified Surgeons Asked

Medical Tribune Report

SAN FRANCISCO—The practice of surgery, the new president of the American College of Surgeons advocates, should be restricted to board-certified surgeons, and the number of surgeons should be limited.

Otherwise, Dr. William P. Longmire told the College's Clinical Congress here,



DR. LONGMIRE

the increasing number of new physicians being turned out by the nation's medical schools "may just further engorge" a field of medicine that is already crowded.

"Surgery now is done by an amorphous mass of physicians," said Dr. Longmire, who is Professor of Surgery and chairman of the department at the University of California School of Medicine, Los Angeles. "Some are certified, and some are not."

According to some estimates, as much as half of all surgery performed in the U.S. is being done by uncertified physicians.

"I think that generally speaking," he

said, "we would feel that a trained surgeon is better than an untrained surgeon."

Specialty board certification, "which is the best yardstick that we have available today," and fellowship in the American College of Surgeons should be the criteria of training, Dr. Longmire said.

He proposed that the United States adopt a system similar to that followed by European countries, restricting the number of physicians who can enter specialty training.

Don't Go Where Need Is

"We're tooling up and putting out these thousands of additional physicians," he said, "without any further control over what they do—they just become M.D.s." They do not go, he indicated, where the need is.

For example, he remarked, despite the demonstrated national requirement for more family doctors, "success has not materialized" in the much-publicized campaigns to augment their number.

In California since 1969, he observed, there has been a 14 per cent drop-off in the number of physicians in family or general practice, while a marked increase has occurred in doctors in surgical spe-

cialties, internal medicine, and pediatrics.

For surgery in particular, he recommended, the number of physicians needed to perform the "definitive block of surgery" be calculated, and only as many as necessary to meet that number trained.

This could be done, Dr. Longmire said, by limiting the number of residents accepted in each of the surgical specialties, and by confining the practice of surgery to board-certified surgeons.

Of the performance of surgery by uncertified physicians, the A.C.S. president conceded, "I doubt if you can prohibit this by law." He urged instead the institution of differential pay scales, such as in the military and Veterans Administration hospitals and in Canada. This would provide "an incentive to a man, if he wants to do surgery, to become certified."

Dr. Longmire said that such a differential could be established through Federal legislation, such as amendments to Medicare and Medicaid laws. The national health bill sponsored by Sen. Edward Kennedy (D.-Mass.), he noted, includes provision prohibiting payment for surgery to other than board-certified surgeons.

Wednesday, November 22, 1972

MEDICAL TRIBUNE

9

Many Said to Have Haphazard View of Therapy

Medical Tribune Report

BETHESDA, Md.—Millions of persons in this country make decisions on personal health problems believing that "anything is worth a try."

This trial-and-error approach to such problems is the major underlying cause of questionable health practices in the U.S. population, according to the results of a national study released by the Department of Health, Education, and Welfare.

The study showed that millions of consumers base important health decisions on the idea that in the light of individual difference there is a chance that almost any treatment may be beneficial. Faith in this approach is reinforced by psychosomatic effects and unaided recovery, it was noted.

Some highlights of the study:

- Older people are generally less likely than young people to make irrational decisions on health problems and are more skeptical about efficacy claims for drug-store remedies.

- Forty-two per cent of the persons interviewed, representing 50,000,000 adults, would not be convinced by almost unanimous expert opinion that a hypothetical "cancer cure" was worthless. Only 45 per

cent thought such a medicine should be banned by law.

- Three-fourths of the public believe that extra vitamins provide more pep and energy, the most common of the misconceptions investigated in the survey.

- Although their disorders had never been diagnosed by a physician, 12 per cent of those interviewed, representing about 16,000,000 adults, reported they had arthritis or rheumatism, asthma, allergies, hemorrhoids, heart trouble, high blood pressure, or diabetes.

- Twelve per cent of the sample also indicated they would self-medicate—without seeing a doctor—for longer than two weeks for such ailments as sore throats, coughs, sleeplessness, or upset stomach.

- Twenty-six per cent, representing about 35,000,000 adults, had used nutritional supplements expecting specific observable benefits, without a physician's advice.

- About 2 per cent, representing 2,500,000 adults, indicated they did something every day or nearly every day to help with bowel movement and that they were not following a physician's advice.

The research on health practices and opinions was initiated at the suggestion of the Senate Committee on Aging after hearings on how elderly consumers were

being victimized by frauds and misrepresentations. The purpose of the survey was to investigate false and questionable health beliefs and practices and the public's susceptibility to them.

Dr. Merlin K. DuVal, HEW Assistant Secretary for Health and Scientific Affairs, commented:

"The attitudes, beliefs, and practices of consumers in regard to health problems are critically important. They involve, for example, such questions as the limitations of self-diagnosis, how long self-medication is continued, and when to seek professional care."

"Too little is known about present-day human behavior in health matters. The report provides us with background for decisions in areas such as health and nutrition education and drug labeling."

The 426-page report, *A Study of Health Practices and Opinions*, was made by National Analysts, Inc., of Philadelphia. The study is based on data from interviews with 2,839 adults in a national area probability sample that was taken during the summer of 1969.

The \$157,000 contract for the study was supported jointly by seven Government agencies.

...brief summaries of editorials or guest editorials in current medical journals.

Consumer Participation

"The medical profession has long recognized the value of joint effort with experts in other fields that have common boundaries with medicine in the delivery of health care." And "now that consumers...are becoming more involved in determining the cost, availability, and even the quality of medical care, the medical profession has new partners in decision making."

Recommendations made by a group composed of professional, consumer, and commercial interests "might be more realistic, or at least better accepted (even in allocating research funds), than those made by any of its component individuals or organizations...."

"The community group might also contribute new ideas and information that would help to shape future medical education. Through dispassionate analysis, it might conclude, for example, that we ought to diminish our present emphasis on long and intensive training for all physicians and turn instead to producing more physicians faster, reserving the longer, more comprehensive education for a relatively few."

This group might also "choose whether money and personnel should be allotted to spectacular and well-publicized procedures or the kinds of treatment that are less celebrated but far more important medical and economically....Such choices might even be made on the strength of the same facts used by the medical profession in reaching the same decision, yet be better accepted because of the group's greater strength in public relations," Dwight L. Wilbur, M.D., editorial, *(Postgrad. Med. 52:230, September, 1972.)*

Smoking in Irish MDs

A recent survey of physicians in Ireland has indicated that physicians of both sexes smoked significantly less than the general population. There was also a higher percentage of ex-smokers in this group than there was among the general population.

The data are "encouraging. Doctors are gradually stopping the cigarette smoking habit or changing to other forms of tobacco, but this trend is evident among many other professional people and among university graduates in general. It is probable that the cigarette smoking habit started among the better educated people and among those in the more privileged social classes. They popularized a habit which spread widely to all segments of society. It is to be hoped that the example now being set by the professional classes and by the more privileged members of society will be followed with the same success by the entire community." R. Mulcahy, editorial, *(J. Ir. Med Assoc. 65:46, September 2, 1972.)*

Urinary Tract Infections

Many remain unaware of the fact that, despite the most meticulous procedures in bacteriologic laboratories, bacteriologic diagnostics are often inadequate because of poor sampling, poor storage and transport, and misunderstandings regarding "quantitative bacteriology of the urinary tract." Suprapubic aspiration is an excellent method for the diagnosis and control of urinary tract infections. It solves most of the clinician's problems, be they in the hospital or in private practice. The clinician who has problems with "pollution" and does not achieve satisfactory results from urine sampling and control of urinary tract infections should adopt the aspiration method, either in the hospital or in private practice. J. Boe, editorial, *(Tidskrift for den Norske Lægeforening [J. Norwegian M. A.] 92:28, October 10, 1972.)*

Apresoline...anti-hypertensive idea whose time has come

A flexible approach that helps meet the goals of today's new therapeutic concepts

Early and more vigorous treatment of hypertension. More adequate control of blood pressure. Antihypertensive regimens closely molded to individual requirements.

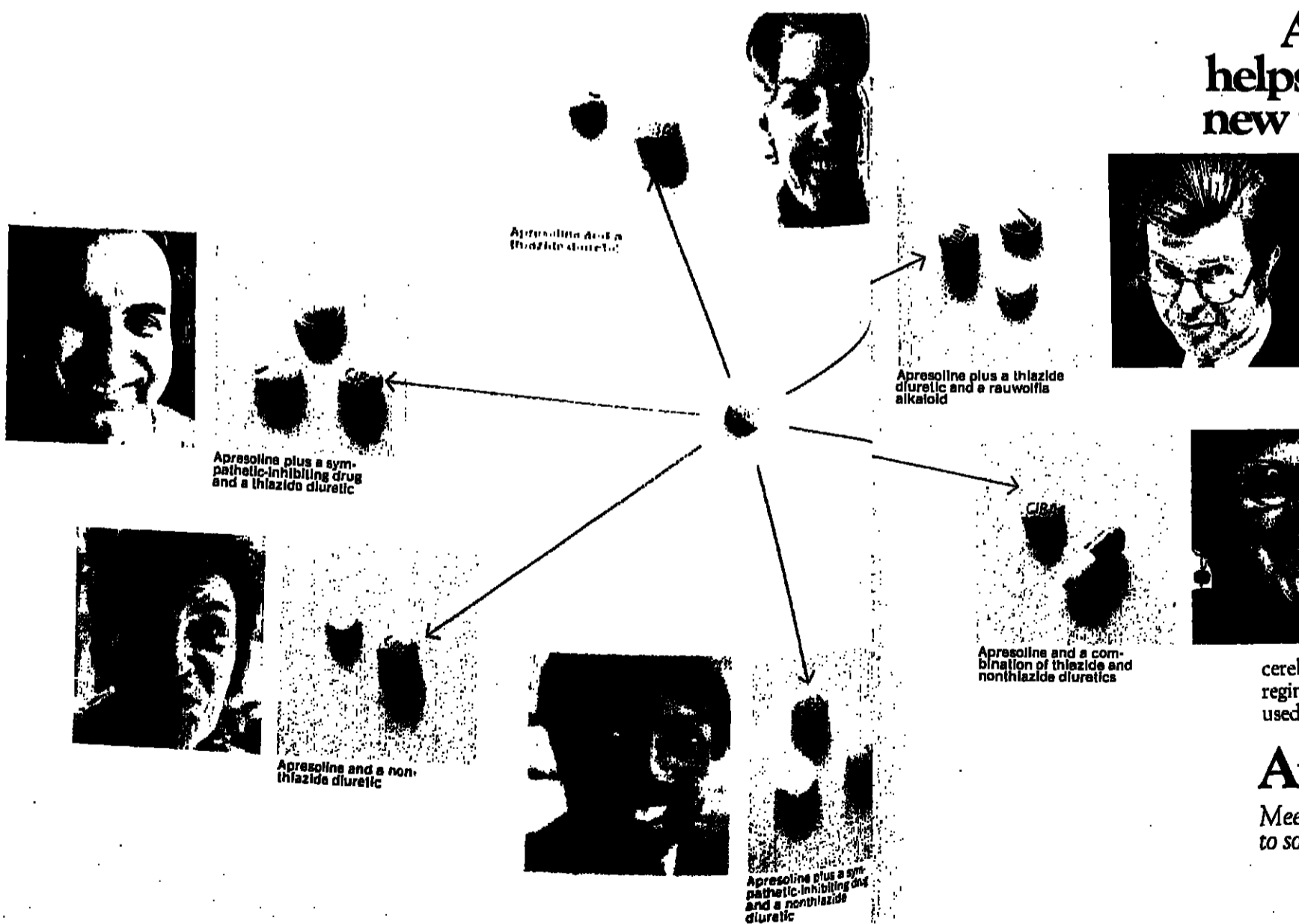
These goals can be met in part with Apresoline. An antihypertensive agent unique in its mode of action, Apresoline can be combined, for added control, with other antihypertensives—thiazide and nonthiazide diuretics, sympathetic-inhibiting agents, and rauwolfia alkaloids. The result: greater choice to the physician in constructing an appropriate regimen.

Apresoline differs from other available antihypertensives in that it appears to act directly on the arterioles where diastolic blood pressure is ultimately controlled. By relaxing arteriolar smooth muscle, it decreases peripheral vascular resistance—decreases arterial pressure.

Apresoline also helps increase renal blood flow and maintain glomerular filtration, and to maintain or increase cerebral blood flow. When Apresoline is added to existing regimens, dosages of each drug are usually lower than when used alone, thus tending to reduce risk of side effects.

Apresoline (hydralazine)

Meets today's needs because it can contribute so much to so many antihypertensive regimens



Apresoline (hydralazine)

hydrochloride (hydralazine hydrochloride)

TABLETS

INDICATIONS

Essential hypertension, alone or as an adjunct.

CONTRAINDICATIONS

Hypersensitivity; coronary artery disease; mitral valvular rheumatic heart disease.

WARNINGS

Chronic administration of doses over 400 mg per day may produce an arrhythmia-like syndrome leading to a clinical picture simulating acute systemic lupus erythematosus. In rare instances, this may occur at lower doses. Most of these

reactions are reversible upon withdrawal of therapy, but long-term treatment with steroids may be necessary. An L.E. cell preparation is indicated in the presence of any unexplained symptoms.

Use MAO inhibitors with caution. Although there has been no adverse experience with Apresoline in pregnancy, the drug should be used only when, in the judgment of the physician, it is deemed essential in the welfare of the patient.

hypotension may occur, and the pressor response to epinephrine may be reduced. Peripheral neuritis, evidenced by numbness, tingling, and burning, has been observed. Published evidence suggests an antipyretic effect and addition of pyridoxine to the regimen if symptoms develop.

Blood dyscrasias, consisting of reduction in hemoglobin and red cell count, leukopenia, agranulocytosis, and purpura, have been reported rarely. If such abnormalities develop, discontinue therapy. Periodic blood counts are advised during prolonged therapy.

ADVERSE REACTIONS

Common: Headache; palpitations; anorexia; nausea; vomiting; diarrhea; tachycardia; ep-

pectoris. Less frequent: Nasal congestion; flushing; lacrimation; conjunctivitis; peripheral neuritis, evidenced by numbness, tingling, and burning; edema; dizziness; tremor; muscle cramps; psychotic reactions characterized by depression, disorientation, or anxiety; hyperreflexia; constipation; difficulty in micturition; dyspnea; paralytic ileus; lymphadenopathy; splenomegaly; blood dyscrasias, consisting of reduction in hemoglobin and red cell count, leukopenia, agranulocytosis, and purpura.

POSSIBLE

fatal to therapy in gradually increasing dosages adjust according to individual responses. Start

with 10 mg 4 times daily for the first 2 to 4 days, increase to 25 mg 4 times daily for balance of first week; for second and subsequent weeks, increase dosage to 50 mg 4 times daily. For maintenance, adjust dosage to lowest effective level.

Although a number of patients respond to large doses of Apresoline alone, the incidence of toxic reactions, particularly the L.E. cell syndrome, is higher in this group. The majority of patients have a significant antihypertensive effect if no more than 300 mg Apresoline is used daily and is combined with a thiazide, reserpine, or both.

HOW SUPPLIED

Tablets, 10 mg (pale yellow, dry-coated); bottles of 100 and 1000.

Tablets, 25 mg (deep blue, dry-coated); bottles of 100, 500, and 1000.

Tablets, 50 mg (light, dry-coated); bottles of 100, 500, and 1000.

Tablets, 100 mg (pale, dry-coated); bottles of 100.

Consult complete literature before prescribing.

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Summit, New Jersey 07901

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BETADINE Skin Cleanser*

a distinctly superior alternative to hexachlorophene skin cleansers



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TO THE CONCERNED PHYSICIAN:

In view of recent official restrictions on the sale of hexachlorophene-containing products, the advantages of skin degerming with the microbicide BETADINE Skin Cleanser have become even more significant.

This closely studied antiseptic contains no hexachlorophene and thus avoids its harmful side effects. Incidence of local irritation or sensitivity is rare.

Of major importance is the fact that BETADINE Skin Cleanser exerts an exceptionally potent microbicide effect. It is pertinent to note that for the Apollo Lunar Missions NASA selected the same formula for its critical degerming procedures, well before the hexachlorophene alarm was sounded.

Basic advantages, such as the following, are welcome in many clinical situations:

Broad range microbicide effectiveness: BETADINE Skin Cleanser, unlike hexachlorophene, kills both gram-positive and gram-negative bacteria, including antibiotic-resistant organisms. It also kills yeasts, fungi, viruses and protozoa.

Prompt microbicide activity: In contrast to bacteriostatic agents like hexachlorophene, BETADINE Skin Cleanser is microbicide with every use. No repeated usage—as required with hexachlorophene—is needed to achieve full effectiveness.

As useful in the office and home as in the hospital: BETADINE Skin Cleanser provides non-selective microbicide action in preparation for minor surgery; for home use in degerming the skin; and to help prevent spread of infection in acne lesions.

For further information on this and other BETADINE microbicide products, please write to our Medical Department or contact your Purdue Frederick representative.

Cordially yours,

Robert E. Gundel

Robert E. Gundel, M.D.
Medical Director

The Purdue Frederick Company

*Also known as BETADINE Surgical Scrub Skin Cleanser

DEDICATED TO PHYSICIAN AND PATIENT SINCE 1892

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"A breakthrough at last! We've just made a cold germ nervous."
© 1972 Medical Tribune

Vitamin C for the Common Cold Vindicated

OWING TO THE COMBINATION of fewer episodes and fewer days per episode, the difference between the groups was marked in terms of days per subject, particularly days confined to the house, in which the mean figure for the vitamin group was 30 per cent lower than that for the placebo group, a difference which was statistically significant ($P < 0.001$).

This was the essential finding of an exquisitely well-controlled, randomized, double-blind trial of the utility of vitamin C as preventive and therapy for the common cold, reported in the September 23 issue of the Canadian Medical Association Journal (see page 1). It was carried out by Dr. T. W. Anderson, Associate Professor, Department of Epidemiology and Biometrics at the University of Toronto; Prof. D. B. N. Reid, of the same department; and Prof. G. H. Beaton, head of the Department of Nutrition at the same institution.

For some years Nobel Laureate Linus Pauling has cited "scientifically valid evidence" that vitamin C, "taken in proper amounts, has the effect of decreasing the incidence and severity of the common cold, whereas the ordinary cold medicines do not have this effect." Pauling has said, "I find it shocking that physicians and nutritionists should misrepresent the facts and should refuse to recognize the value

of this important food, vitamin C, in improving health."

Of course, Dr. Pauling is a chemist, not a physician, and his two Nobel Prizes are for chemistry and for peace. His scientific acumen is legendary, and it would seem foolhardy to question his ability to recognize and distinguish valid from invalid data. He has not performed any of the clinical studies but has singled out a number as "well-designed investigations" that demonstrated to his satisfaction the utility of vitamin C for the prevention and treatment of the common cold. Nonetheless, his medical critics have attacked the studies he has selected as "uncontrolled or inadequately controlled." Indeed, a "Current Opinion" guest editorialist in the September 15, 1971, issue of MEDICAL TRIBUNE, in the course of labeling acupuncture as "a powerful placebo," referred to "a prominent scientist in an unrelated field [who] on dubious evidence extols the virtues of vitamin C for the common cold and gains many followers."

It will be extremely difficult for such critics to label the Toronto study as "dubious evidence." It seems likely that the vitamin C controversy will also wind up in that amazing category of striking new advances that are at first treated with derision by contemporary scientists. The authors of the Toronto study themselves admit that they came to scoff but remained to praise.

Educating Your Patients

IN SEEKING TO MOBILIZE government educational action against major killers and disabilities, the Public Health Service is preparing ads designed to help the physician educate his patients.

The most recent of these is an informative poster on the hazards of smoking (see page 1). Intended to serve as a teaching tool for use with patients, the PHS poster shows in vivid detail—explainable to a layman—the dramatic anatomic changes occurring in emphysema and their relationship to cigarette smoking. The correlation of anatomic defects with the number of cigarettes smoked daily makes a crucial point.

We are pleased to cooperate with the PHS in making these posters available to physicians. MEDICAL TRIBUNE has, since its inception, consistently backed the need to recognize new priorities in public health measures. The clean-cut relationship of cigarette smoking, not only to heart disease and lung cancer, but to emphysema as well, has caused growing concern in medical and government circles throughout the world. The failure of educational programs to reduce smoking and alcohol use, both of which have been identified as

two of the most toxic substances to which man is exposed, has led to the search for new means to arrest the continuing and growing medical toll exacted by these two agents.

The PHS antismoking poster marks a new approach, invoking the direct aid of the physician and offering him a tool for reaching the patient in his office. The personal authority of the physician and the ambience of the office visit, combined with the object lesson offered by the poster, all suggest that this may prove to be an exceptionally useful way to bring the patient a vital lesson in preventive medicine.

The poster is available free of charge to all physicians, and a letter or your prescription blank addressed to

Poster,
Medical Tribune
880 Third Avenue
New York, N.Y., 10022

will bring you a copy or copies, in accord with your request. This important educational material comes with an explanatory summary based on the internationally recognized studies of cigarette smoking and lung disease by Dr. Oscar Auerbach and E. Cuyler Hammond, Sc.D. A.M.S.

External Counterpulsation

CLINICAL QUOTE "... External counterpulsation is a practical, safe, atraumatic, and effective circulatory assist technique. Early treatment of patients with coronary occlusions may reduce the size of

the permanent injury, improve the course of recovery, and reduce the incidence of cardiogenic shock..." Dr. Harry S. Siroff at the American College of Surgeons meeting; see page 3.)

The Tail That Wagged the Medical Education Dog

Editor, MEDICAL TRIBUNE:

Thanks for your splendid editorial on the full-time professor (MEDICAL TRIBUNE, September 13). I could not agree with you more. I think a perfectly horrible thing is happening in the teaching of medical students today. They are being taught usually by the junior staff and residents and seldom come in contact with the heads of departments or even those of the next echelon. Too many of the senior staff are too busy doing research or traveling, much of which is not worth while. All of us believe in research, but to let the tail wag the dog, as is now happening, and leave the poor undergraduate student stranded does not lead to good medicine.

Thanks again for your splendid editorial. I hope it will do some good... but I fear it may fall on deaf ears.
ALTON OCHSNER, M.D.
New Orleans, La.

Athletes' Osteoarthritis

Editor, MEDICAL TRIBUNE:

Regarding your article on the osteoarthritic problem in athletes (MEDICAL TRIBUNE, October 11), I might add that I enjoy so much the continuing, up-to-date MEDICAL TRIBUNE reports on athletics. I think it does a world of good to hear what others have to say.

I'm not quite in agreement with Dr. Morehouse in that he found no relation to knee instability and ligamentous tearing. I feel that Dr. Morehouse's study, though commendable, did not include other parameters of rotation and of the tibia. Measurements of simple instability in the horizontal plane simply don't tell the story, and I think that the test that we've used to all rotational laxity with high or low extremity. Combining extreme flexibility at the hip and ankle on top of some looseness in the knee, in my opinion, does predispose to ligamentous tearing, especially if the patellar tubercle rotates beyond the lateral margin of the patella.

I would agree completely that one type of instability—namely, mediolateral laxity—is not, in itself, an indicator of the potentiality of knee injury, but I can't help feeling that progress continues to show that, when there are three or four parameters of laxity indicative of marked total low-extremity laxity, the ligamentous injury rate is much higher. Studies in the future of this type would be more conclusive if one could

study the rotational laxity of the ankle, knee, and hip in an effort to see if one then finds more ligamentous injury.

JAMES A. NICHOLAS, M.D.
New York, N.Y.

Exercise and the Heart

Editor, MEDICAL TRIBUNE:

I would submit that your recent editorial "Exercise for the Heart—an Act of Faith?" is itself an appeal to emotions and faith rather than an understanding of research data available to any interested reviewer. The writer has conveniently swept all of the questions regarding exercise therapy into one pile and declared the whole pile unproved. Had he been careful enough to research his comments, he would have clearly seen that many of the questions are now resolved.

Certainly no responsible leader in this field ever suggested that exercise by itself reduces atherosclerosis; nor have they claimed that it prevents coronary heart disease, extends life, or prevents recurrence once the disease is manifested. Parenthetically, there is epidemiological and statistical evidence suggesting such results. These are long-term, hoped-for goals.

On the proved side, however, many short-term effects of exercise therapy are now quite well known. Oxygen requirements of myocardial work fall with the drop in resting and exercise heart rate and blood pressure—a very clear-cut benefit to the coronary patient, particularly the one with angina. Work capacity increases, as does cardiac stroke volume and maximum oxygen uptake. Glucose improves, triglyceride levels may drop, and the efficiency of the peripheral blood distribution and return increases. There are other known effects as well, but the improved patient self-confidence and sense of well-being frequently are the best results from the patient's standpoint. Though the writer makes light of these psychologic benefits, they are so real and dramatic in so many patients that they stand by themselves as a prime reason for exercise therapy.

In the years past, we used insulin for great patient benefit for its short-term effects alone. We hoped it would prolong life and reduce atherosclerosis. It now appears to do neither, yet we used insulin for the results it did provide. I suppose there were physicians at that time, too, who condemned its use, preferring to beat their breasts about the unknown rather than apply the known for their patient's benefit.

FRANK W. JACKSON, M.D.
Harrisburg, Pa.

G.I. FORUM

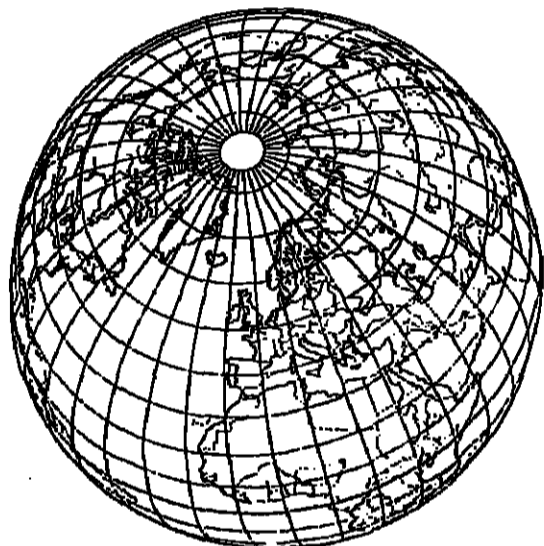
A CURRENT REVIEW OF INVESTIGATIONS IN GASTROENTEROLOGY

O is for ulcer: "myth" or fact?

As recently as 1967, one highly respected investigator¹ branded as a "myth" the belief that persons with blood group O are more susceptible to duodenal ulcer than those with other blood groups. In an earlier paper,² he expressed the opinion that studies undertaken decades before conclusively discredited any link between blood groups and disease; he also cites statistical and technical pitfalls inherent in any investigation of the link. But other researchers do not share his opinion:

Documented in many countries

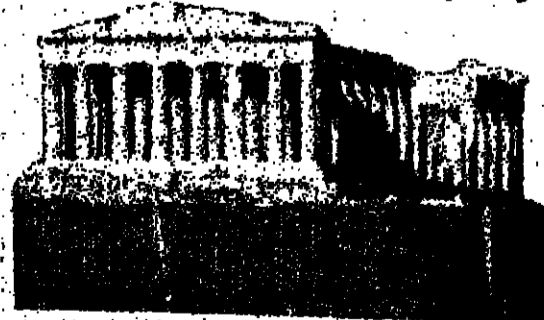
An exponent³ of the group believing that there is truth in the "O for ulcer" theory concedes that early



studies were flawed either by inefficient analysis or insufficient numbers of patients. He states, however, that starting in 1953 in England, very careful investigations were initiated to try to correlate certain conditions with specific blood types. One such study revealed a marked association between peptic ulcer and blood group O. Similar projects were soon undertaken in other parts of the world. Thus, today we can read in the 1971 edition of an authoritative medical textbook⁴ that, while the reasons are unknown, the apparent greater susceptibility of persons with O-type blood to peptic ulceration has been noted in many countries throughout the world.

Greece—mythology and pathology

Curiously, Greece—the country that gave the world one of the most pervasive of all mythologies—



is also one of the countries that recently contributed impressive evidence to help bring the "myth" of group O susceptibility to duodenal ulcer closer to fact. A recent study⁵ consisted of a review of the records of 49,375 patients treated between 1950 and 1960 by the various departments of Evangelismos Hospital, Athens. Of these, 3858 were found to have had peptic ulcer disease. Only the ulcer patients whose blood groups had been determined were included in the study: 2197 patients—1790 men and 407 women ranging from 17 to 81 years of age. The ratio of gastric to duodenal ulcer was about 1:5. One of the author's conclusions was that Greeks with group O blood stand a 20% higher chance of developing ulcer disease than those with group A blood.

Another factor: excessive anxiety

Renewed interest in the correlation of blood types and ulcer diseases dates only from the early 1950's. The role of anxiety in duodenal ulcer, however, has long been noted. For example, it has been observed⁶ that the situations that may precipitate an ulcer are not as important as the individual's reaction to these situations.

References: 1. Wiener, A. S.: *Med. Ophthal. Rev.*, 3:(10)148, 1967. 2. Wiener, A. S.: *Lancet*, 1:813, 1962. 3. Clarke, C. A.: "Blood Groups and Disease," in Steinberg, A. G. (ed.): *Progress in Medical Genetics*, New York, Grune & Stratton, 1961, vol. 1, pp. 81-87. 4. Kirsner, J. B.: "Acid-Peptic Disease," in Berson, P. B., and McDermott, W. (eds): *Cecil-Loeb Textbook of Medicine*, ed. 13, Philadelphia, W. B. Saunders Company, 1971, vol. 2, p. 1266. 5. Merikak, G.; Christakopoulos, P., and Petropoulos, F.: *Am. J. Dig. Dis.*, 11:790, 1966. 6. Palmer, E. D.: *Clinical Gastroenterology*, New York, Paul B. Hoeber, Inc., 1957, pp. 190-191.

Dual-action Librax for the undue psychic tension, and for the G.I. hypermotility and hypertension

Whatever the events that may cause the undue psychic tension that may trigger the ulcer—and whatever the blood group involved—the psyche may require as much attention as the soma. This is where the dual therapeutic approach of Librax[®] can help. Only Librax combines in a single capsule the well-known antianxiety action of Librium[®] (chlordiazepoxide HCl) with the antispasmodic/antiparasympathetic action of Quazalan[®] (clidinium Br).

Up to 8 capsules daily in divided doses

When Librax acts to help relieve excessive anxiety that often exacerbates physical symptoms, it also helps reduce G.I. hypermotility and hypersecretion—thereby helping to relieve associated spasm and pain. For optimum response, the dosage of Librax should be adjusted according to your patient's requirements: 1 or 2 capsules before meals and at bedtime.

Before prescribing, please consult complete product literature, a summary of which follows:

Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis, and mild ulcerative colitis.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug are similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anxiolytic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage; smallest effective amount to preclude development of ataxia; oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropic drugs seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depressive tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and on anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects of manifestation not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible on most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor muscular irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in ECG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librium are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

for the anxiety-related symptoms of duodenal ulcer adjunctive Librax[®]

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Roche Laboratories Division of Hoffmann-La Roche Inc. Nutley, N.J. 07110

Wednesday, November 22, 1972

MEDICAL TRIBUNE

15

Isolation of Enzyme May Aid In Therapy for Parkinsonism

Medical Tribune Report

ROCKVILLE, MD.—Isolation by Yale University scientists of an enzyme essential to the brain's control of bodily movement appears to have significant implications for the treatment of Parkinson's disease, the National Institute of Mental Health commented.

Paul Greengard, Ph.D., Gary Petzold, Ph.D., and John Kebabian, Ph.D., conducted the research under grants from NIMH and the National Institute of Neurological Diseases and Stroke.

In recent years, NIMH observed, medical scientists have produced evidence that the caudate nucleus plays a major role in directing movement of the body. In turn, dopamine is believed to regulate the activity of the caudate nucleus by interacting with a previously unknown chemical substance, the "dopamine receptor." Abnormalities of the dopamine system in the caudate nucleus are believed to be a major factor in Parkinson's disease.

Dr. Greengard's team has isolated from the caudate nucleus of experimental animals an enzyme that appears to be the

dopamine receptor, NIMH said. Its name, "dopamine-sensitive adenylate cyclase," describes the chemical change it produces. Activity of this enzyme is stimulated by extremely low concentrations of dopamine.

Apart from increasing basic understanding of how the brain works, clinical implications of the Yale team's findings are far-reaching, NIMH said. The search for new drugs useful in the treatment of Parkinson's disease has been hampered by lack of a suitable test system. Isolation of the dopamine receptor makes it possible to carry out rapid testing of large numbers of compounds for dopamine-like activity and should accelerate the discovery of new compounds for treatment of the disease.

A secondary yield of the research, NIMH continued, may lie in the treatment of mental illness. Such tranquilizers as the phenothiazines and butyrophenones possess as a major side effect the property of causing symptoms similar to those seen in Parkinson's disease, limiting the freedom of physicians to use these drugs.



Sun Ssu-miao (640-720) was an alchemist and physician during the Tang Dynasty of China (618-907). He was a famous physician who prepared his own medications for patients and was a prolific author. He wrote the book of the *Thousand Precious Prescriptions* and is believed to have written the *Yin-hai ching wei*, or *The Delicacies of the Eye*.

This stamp was issued 10 years ago by the People's Republic of China in a series honoring scientists of ancient China.

Text: Dr. Joseph Kler Stamp: Minkus Publications, Inc., New York

Urologic Surgery

The need for massive psychologic support and guidance for children who undergo reconstructive urologic surgery to provide the genitalia they lacked at birth, and for their parents, was stressed by a four-man team from Columbia University's College of Physicians and Surgeons and Babies Hospital.

"It is not enough to build a new person surgically (especially if the genitalia are involved); you must support, counsel, and reassure the inner man as well," they said. The team—consisting of Todd Feinberg and Katherine Jeter and Drs. William Langford and John K. Lattimer—called particular attention to private worries about sexual performance and urine exit at a new location that patients should be helped to reveal.

Status Asthmaticus

In children with status asthmaticus and severe hypercapnia, intravenous infusion of isoproterenol reduces the incidence of respiratory failure requiring mechanical ventilation, shortens the duration of severe hypercapnia, produces few, if potentially serious, complications, and deserves extensive clinical trial, according to Dr. John J. Downes, of Children's Hospital, Philadelphia.

His collaborators were Drs. David W. Wood, Ivan Harwood, and Harold N. Sheinkopf.

Pulmonary Function Test

A 10-minute test of pulmonary function, using methacholine in aerosol to induce bronchospasm in susceptible subjects, has differentiated "habit" cough from other causes of paroxysms of coughing in children, Dr. Patricia A. Nell of Green Bay, Wis., reported.

Seventeen children, ranging in age from six to 14 years and with undifferentiated cough, who were symptom-free for 24 hours and off all medication for 12, were given deep inhalations of the aerosol for two minutes, and five of them developed significant bronchospasm, she said.

Warm-Blanket Surgery

The use of an electric warming blanket covered by two layers of cotton blanket under children undergoing anesthesia with halothane, nitrous oxide, and oxygen is an effective method of conserving heat when the patient's surface area is less than 0.5 sq. M., according to Drs. Nishan G. Goudsouzian, R. H. Morris, and J. F. Ryan, of the Anesthesia Laboratories of Harvard Medical School at Massachusetts General Hospital.

"For practical purposes," they said, "a child with a surface area of 0.5 sq. M. weighs 10 kilos and is 12-14 months of age."

Seven infants of this size were anesthetized and underwent surgery on the warming blanket, while six control infants were not placed on the blanket.

The investigators report that the fall in body temperature was significantly less for the warmed patients after 60, 75, 105, and 120 minutes of anesthesia.

They also compared groups of children with a surface area of more than 0.5 sq. M. Six children in this category underwent anesthesia and surgery on the warming blanket, while six controls did not have the blanket, but no significant differences in temperature fall in these larger children was found at 60, 75, 90, 105, or 120 minutes of anesthesia.

They concluded that, since there were potential hazards in the use of the blanket, they could not recommend its routine use for larger children.

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Hydralazine Common: Headache, palpitations, anorexia, nausea, vomiting, diarrhea, tachycardia, angina pectoris. Less frequent: Nasal congestion, flushing, lacrimation, conjunctivitis, parosmia, edema, dizziness, tremor, muscle cramps, psychologic reactions characterized by depression, disorientation, or anxiety; hypersensitivity reactions including skin rash and vascular collapse; constipation; difficulty in micturition; arthralgia; dyspnea; paralytic ileus; lymphadenopathy; splenomegaly.

Hydrochlorothiazide: See hydrochlorothiazide section above.

DOSEAGE Adult: Optimal dosage must be determined for each individual. Note: 10 mg guanethidine monosulfate present in Librium is equivalent to 8-4 mg guanethidine sulfate USP (Ismelin®).

See-As-Is One or 2 tablets 1-4 times daily. To initiate therapy, 1 tablet 1-4 times daily is recommended. For maintenance, adjust dosage to lowest patient requirement. When necessary, more potent antihypertensives may be added gradually in dosages reduced by at least 50 percent.

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Drug Taking Found Common in Children World-Wide

Medical Tribune World Service

AMSTERDAM—Drug taking among children and adolescents was one of the main preoccupations at the 30th International Congress on Alcoholism and Drug Dependence here.

British participants drew particular attention to the persistent use of amphetamines and the marked trend towards experimentation with a variety of drugs.

"There is probably not a school in the whole of the United Kingdom in which drug experimentation does not take place," Dr. H. Dale Beckett, chairman of the British Association for Prevention of Addiction, told the gathering of about 1,200 doctors, researchers, and social workers.

Dr. Beckett, who is consultant psychiatrist at Cane Hill Hospital, Surrey, declared that there is now an acute need for a voluntary preventive program that would be more concerned with educating teachers, parents, and the general public to cope with the situation than with setting up expensive institutions and specialized services.

I. Hindmarch, Ph.D., Lecturer in Psychology at Leeds University, reported that a survey of attitudes toward drugs among 1,126 schoolchildren, which he recently

completed, confirmed earlier findings that 6 to 10 per cent of adolescents in Britain were taking drugs for other than medical reasons.

Comparing trends among university and college students with those among schoolchildren, he said that whereas the former are characterized by their indulgence in cannabis, the latter favor the stimulant drugs. The use of amphetamines, by far the most popular drug in the survey, was particularly worrying, he commented, since they are drugs of dependence that cause an escalation of dosage in a relatively short time.

Dr. Hindmarch's research on the youngsters' attitude towards drugs showed: 61 per cent thought that drugs are all right if taken occasionally; 58 per cent, that they are an aid to creative people; 62 per cent, that they are not so dangerous as the newspapers make out; and 44 per cent, that it is safer to drive with someone high on marijuana than drunk on alcohol.

Dr. Robert Kramer, Associate Professor of Pediatrics at the University of Connecticut, reported on an adolescence dependency pilot program started at the university in 1970, in which 86 young drug takers were studied. He concluded, he

said, that there is true drug dependency among adolescents: that they become as antisocial as their adult counterparts, resorting to stealing, dealing, and prostitution; that they tend to be of above average intelligence; and that, finally, they are capable of change and are able to participate in rehabilitation programs.

Methadone

At a press conference, Harold Aksne, a member of the executive center of the U.S. National Association for the Prevention of Addiction to Narcotics, reported an 80 per cent success rate with methadone. There is no doubt, he said, that methadone is a valuable aid in the gradual elimination of heroin and morphine cravings, but as it is itself an addictive drug, its use should be under strict medical supervision.

Dr. L. H. Bronson, of the Cleveland Center on Alcoholism and Drug Abuse, said that "the prolonged use of low doses of methadone may be justified, as a means of keeping a person in treatment until social rehabilitation has been accomplished," but that high-dose methadone maintenance has many disadvantages. One, he noted, is that the period required for withdrawal

and detoxification can be very lengthy. Experience has shown, he said, that 60 to 65 per cent of patients benefit from the low-dose regimen of 10 to 30 mg. daily for from several weeks to a year.

Fears about the effects of methadone on pregnant women were discounted by Drs. George Blinick and Robert Wallach, of the Beth Israel Medical Center, New York.

"They found that women treated with large doses of methadone showed regular menstruation, ovulation, conception, and pregnancy. One-third of their babies weighed less than 2,500 Gm. and were therefore, in weight terms, premature, they reported, but no congenital abnormalities were found and so far there seems to be no impairment of physical and intellectual development."

Cannabis

Although experiments on rats by Dr. G. Cheshier, of Sydney University, Australia, produced some evidence of the cumulative and tolerance effects of cannabis extracts, a highly complex and detailed study of cannabis smokers by the Alcoholism and Drug Addiction Research Foundation in Ontario suggested that the drug produces little, if any, damage to general physical health.

Among their chief results was evidence that cannabis does not produce dependency and that, although combinations of cannabis and alcohol in above-average quantities tend to impair work productivity, cannabis alone does not seem to do this to any great extent.

Phencyclidine

Among discussions on drugs less commonly used for nonmedical reasons came a warning from Dr. D. Lehman, of the Yeshiva University College of Medicine, that youngsters are now using phencyclidine, or PCP, in the belief that it is a cannabis extract.

The effects of PCP, he said, are unpredictable and lead to central nervous system depression, hallucinations, and all forms of abnormal behavior.

"It is important," he added, "that the medical profession be aware of this drug and its effects on young people in today's drug scene."

Prescribed Drugs

The use of drugs prescribed for medical reasons also came under some discussion, with a warning that psychiatrists are too casual in the extent to which they dole out large quantities of potentially addictive or dangerous drugs.

But a reassuring point was made by the National Institute of Mental Health, which denied that Americans are being "dramatically overmedicated." Although a survey found that a sizable minority use medically prescribed over-the-counter psychotherapeutic drugs, few use them on a regular and continuing basis.

There is "an unfortunate tendency to exaggerate the extent of hard-core abuse by considering only the number of people using drugs, while ignoring the manner in which the drugs were used," the report said.

Alcohol

Although the new drug scene in all its hues claimed most attention from outsiders, alcoholism remained a major interest in the congress program. The role of the wife in helping to treat the male alcoholic and the need for her to be encouraged to seek professional help was emphasized by D. I. Meier, alcoholism counselor, of St. Louis.

Dr. R. H. Wilkins, Lecturer in General Practice at Manchester University, England, similarly concentrated on sociologic aspects in a paper that argued that the general practitioner who specifically asks questions about alcohol abuse among patients with certain "at risk" factors would detect a considerable proportion of previously undiagnosed disease.

Dr. M. T. Malcolm, of the Regional Addiction Unit in Moston Hospital, Chester, England, found that implantation of disulfiram was useful in the treatment of chronic alcoholics who had lost the motivation for taking the drug in tablet form.

Wednesday, November 22, 1972

MEDICAL TRIBUNE

19

Panel Asks Immediate End to Syphilis Study

Continued from page 1

of withholding treatment from the infected subjects," the panel concluded. Yet, since the late 1940s, numerous medical authorities have recommended treatment for syphilis with penicillin in all stages of the disease, including late latent syphilis and tertiary syphilis, it emphasized.

As recently as 1969, a technical and medical advisory panel convened by PHS "is reported to have recommended, with some ambiguity," that the surviving participants not be treated, the panel pointed out.

The panel asserted it had received no convincing evidence that participants were adequately informed about the nature of the research, either at its beginning or subsequently. It urged that PHS immediately inform survivors of the nature of the study.

Arrangements should be made "with all

speed" for the health assessment, treatment, and care of all persons included in the study in a suitably adequate, easily accessible facility, the panel said.

Confidentiality Vital

Moreover, every effort should be made to preserve confidentiality with regard to the identification of participants, it continued. PHS epidemiologists should be mobilized to assist in locating all surviving participants as well as others who have been infected as a result of the withholding of treatment from them. Adequate provisions for maintaining the present standards of living of the participants during the evaluation and treatment periods should be undertaken.

At the minimum, any benefits that have been promised to the participants in the past should remain in effect, the panel admonished.

Outlining the role of the Select Special-

ists Group, the panel said that the group should be composed of "competent doctors and other appropriate persons, with experience in the problems arising from this study."

It should include, but not necessarily be limited to, a dermatologist with experience in syphilology, who will serve as chairman, two internists (at least one of whom shall be a cardiologist), a radiologist, a neurologist, an ophthalmologist, a psychiatrist, a doctor of dental surgery, and a social worker.

It should not include anyone who has had prior connection with the study.

The Select Specialists Group will submit a report about its activities to the panel.

Dr. DuVal said that the panel now will act on two other directives:

● To determine whether the study was justified in 1932 and should have been continued when penicillin became generally available.

● To determine whether existing policies to protect the rights of participants in health research conducted or supported by HEW are adequate and effective and to propose improvements, if needed.

Recommendations by Subcommittee

The panel is formally known as the Tuskegee Syphilis Study Ad Hoc Advisory Panel. The recommendations to end the study and provide all necessary medical care were offered by its Subcommittee on Medical Care, headed by Dr. Vernal G. Cave, director, bureau of venereal disease control, New York City Department of Health.

Other members of the subcommittee were Ronald H. Brown, general counsel, National Urban League; Dr. Jean L. Harris, executive director, National Medical Association Foundation; Jeanne C. Sinkford, D.D.S., associate dean for graduate and postgraduate affairs, Howard University; Prof. Jay Katz, Yale Law School; and Fred Speaker, attorney, Harrisburg, Pa.

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Before prescribing, please consult complete product information, a summary of which follows: Indications: Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms. Important Note: *In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzazole acid to follow-up culture media, increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections. Maximum safe total sulfonamide blood level, 20 mg/100 ml; measure levels as variations may occur.

Contraindications: Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

Warnings: Safety in pregnancy not established. Do not use for group A beta-hemolytic streptococcal infections as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. CBC and urinalysis with careful microscopic examination should be performed frequently.

Precautions: Use cautiously in patients with impaired renal or hepatic function; severe allergy or bronchial asthma. Hemolysis, frequently dose related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoplasia, thrombocytopenia and methemoglobinemia. Allergic reactions: Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctivitis and scleral injection, photosensitization, arthralgia and allergic myocarditis. Gastrointestinal reactions: Nausea, anorexia, abdominal pain, flatulence, diarrhea, anorexia, pancreatitis and stomatitis. CNS reactions: Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. Maculaneous reactions: Drug fever, chills and toxic nephrosis with oliguria and anuria. Pericarditis nodosa and L.E. phenomenon have occurred. Due to certain chemical similarities with some potent drugs, diuretics (acetazolamide, furosemide) and oral hypoglycemics, agents, sulfonamides have caused rare instances of water retention, diuresis, and hypoglycemia as well as thyroid emergencies in rats following long term administration. Cross-sensitivity with these agents may exist.

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*Karch-Huber, J., et al. Arch. Intern. Med. 128:200, 1971

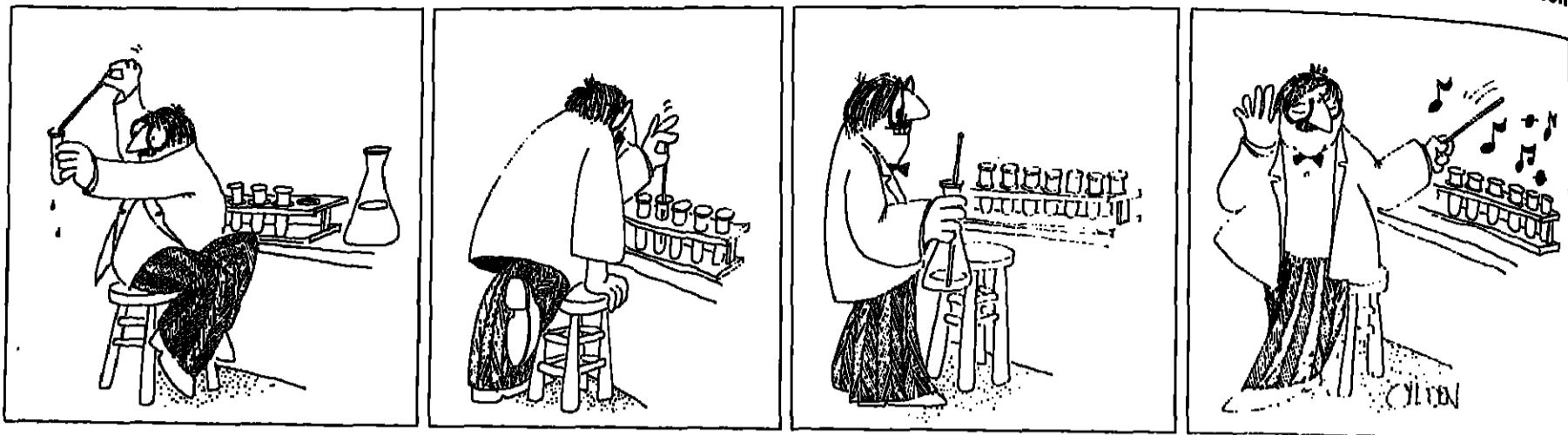
For nonobstructed cystitis

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Usual adult dosage:





Most Soft-Tissue Sarcomas in Child Believed Curable by Current Methods

Continued from page 1

"In fact, the current management of these tumors may be summarized as radical surgery, radical radiation therapy, and radical chemotherapy."

"Dramatic improvements," Dr. Exelby said, have occurred during the past decade in the cure rate of embryonal rhabdomyosarcoma, "by far the commonest soft-part sarcoma seen in children." From 1960 to 1967, he reported, only 18 of 94 children with this lesion at Memorial Hospital were cured, a survival rate of 20 per cent. From 1968 to 1970, when chemotherapeutic agents were first used intensively in these patients, 13 out of 32, or 40 per cent, are alive more than two years. During the same period, he added, M. D. Anderson Hospital investigators in Houston, Tex., reported a 66 per cent survival rate, using surgery, radiation, and chemotherapy.

Even Greater Improvement

"Although it is still too early to predict, it seems that from 1970 on, when we began combining surgery with radiation therapy and intensive four-drug chemotherapy," Dr. Exelby declared, "our results have shown even greater improvement. Out of 12 primary treatable cases that came to Memorial between 1970-71, 11 children are living more than 12 months free of disease. This is a one-year-plus survival rate of 90 per cent. Of eight children with advanced or metastatic disease, four are surviving more than one year, or 50 per cent."

The physician, who is chief of Memorial's pediatric surgical services, noted that head and neck lesions, because of their location, are rarely amenable to surgery but appear to respond "very favorably" to radiation therapy. "Elsewhere in the body, radical surgical extirpation is the treatment of choice for the primary lesion," Dr. Exelby observed. "I must emphasize that the surgery is still radical, but we are trying wherever possible to preserve extremities."

Current Experience Described

Describing current experience with fibrosarcoma, Dr. Exelby said that while the cure rate of 90 per cent is obviously satisfying, "there is a disturbingly high rate of amputation" in these children. Further, the cancer is extremely difficult to eradicate because of the tendency to local recurrence. In the Memorial Hospital series of 22 cases the average number of recurrences was three, and 30 per cent of the tumors recurred as often as five times.

Synovial sarcomas, Dr. Exelby said, are about as common as fibrosarcomas, occurring primarily as a tumor of young adults. Of 12 primary cases seen at the hospital, he continued, nine patients are living three to 30 years after treatment, free of disease. Only two of 13 patients who were admitted with metastatic disease are alive five years after treatment.

"We are undoubtedly making great progress in the management of soft-part sarcomas in children and are now in a position to say that we can cure many of these tumors, if diagnosed and treated early," Dr. Exelby concluded. "It must be emphasized that any lump or abdominal

mass on a child must be excised and histological diagnosis made at the earliest possible opportunity. The improvement in our results is undoubtedly due to the combined aggressive treatment of these children by the surgeon, radiotherapist, and chemotherapist."

RESULTS OF TREATMENT

Year	Number of patients	Treatment	Cure
1960-1966	73	Surgery & RT	18%
1967-1969	38	Surgery & RT + Chemotherapy	36%
1970-1971	15	Surgery and/or RT + 4 drug Chemotherapy	73% (NED 1yr +)

the uncover girl...



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INDICATIONS: Vioform-Hydrocortisone is indicated for the treatment of contact dermatitis, allergic contact dermatitis, and atopic dermatitis. It is also indicated for the treatment of seborrheic dermatitis, pityriasis, and other superficial skin disorders.

WARNINGS: This product is not for systemic use. In the presence of systemic infections, appropriate systemic antibiotics should be used. Use in Pregnancy: Although topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use in pregnant females has not been established. Therefore, they should not be used extensively on pregnant patients in large amounts or for prolonged periods of time.

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antifungal • antibacterial • anti-inflammatory • antipruritic

*This drug has been evaluated as possibly effective for this indication. See brief prescribing information.

In the diaper of urine. Prolonged use may result in overgrowth of nonsusceptible organisms requiring appropriate therapy.

ADVERSE REACTIONS: Few reports include: Hypersensitivity, local burning, irritation, pruritus. Discontinuing if untoward reaction occurs. Rarely, topical corticosteroids may cause striae at site of application when used for long periods in intertriginous areas.

DOSEAGE: Apply a thin layer to affected areas 3 or 4 times daily.

HOW SUPPLIED: Cream, 3% Iodochlorhydroxyquin and 1% hydrocortisone in a water-washable base containing stearic acid, alcohol, spermaceti, petrolatum, sodium lauryl sulfate, and glycerin in tubes of 1 and 20 gm. Ointment, 3% Iodochlorhydroxyquin and 1% hydrocortisone in a petrolatum base, tubes of 1 and 20 gm. Lotion, 3% Iodochlorhydroxyquin and 1% hydrocortisone in a water-washable base containing stearic acid, cetyl alcohol, lanolin, propylene glycol, sorbitol, lecithin, polyethylene glycol, triethanolamine, hydroxyacetone, propylparaben, and perfume. Flare in water; plastic squeeze bottles of 15 ml.

Mild Cream, 3% Iodochlorhydroxyquin and 0.5% hydrocortisone in a water-washable base containing stearic acid, alcohol, spermaceti, petrolatum, sodium lauryl sulfate, and glycerin in tubes of 1 and 20 gm. Mild Ointment, 3% Iodochlorhydroxyquin and 0.5% hydrocortisone in a petrolatum base; tubes of 1 and 20 gm.

Consult complete product literature before prescribing.

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Swiss Paraplegia Expert To Join Harvard Faculty

Medical Tribune Report
BOSTON—Dr. Alain B. Rossier, a Swiss specialist in the treatment of paraplegia and quadriplegia, will become Professor of Social Medicine and Spinal Cord Rehabilitation in the Faculty of Medicine at Harvard University next March, it was announced here.

A paraplegic himself as a result of a diving accident, he has been granted a certificate of registration by a special act of the Massachusetts Legislature to enable him to practice in the United States.

The Harvard announcement said that Dr. Rossier, the first man to be trained especially as a spinal neurologist, is currently director of the spinal cord injury service of the University of Geneva, Switzerland, which he established in 1964 and has built into one of the world's outstanding paraplegic units and one of the few closely connected to a medical school.



Dr. Rossier

The Mail

● Is *Holiday Magazine* joining the porno?

Dr. Sam A. Nixon of Floresville, Tex., has sent us a promotional letter from the magazine's executive editor that says: "With a fervor we edit out any un-American, un-immoral or un-happy thinking."

● That other Texas contributor, the Nit Picker, reports considerable puzzlement caused by the following sentence in *J.A.M.A.*:

"Then, under fluoroscopic control, a radiologist can introduce with caution a small amount of a powdered solution of diatrizoate sodium (Hypaque sodium) to outline the leak." He asks for help in figuring out what a powdered solution is. (For what it was worth, we wrote him that during World War II days it was unreliably rumored that the Army was working on dehydrated water; just add water to reconstitute. More useful assistance for the Nit Picker is solicited.)

We follow the pair of Texans with a pair of university public information chaps.

● Jack Oswald, of the University of Miami School of Medicine, sent us an advertisement from *Public Relations Journal* that said:

"In New York, corporate headquarters of Industrial America, the *New York Times* delivers more decision-level executives than any other publication." (Obstetricians, please note.)

● Arthur Isbit, of Rutgers University, found the following ad in an unnamed paper:

"Rich, testy man seeks smart, gutsy people. The people I'm going to hire wear their guts on their sleeve."

(Gastroenterologists, plastic surgeons, and highly skilled cleaners, please note.)

We have still another pair, this one, D.O.s.

● Dr. Leonard Staff, Jr., of Tempe, Ariz., was taken by a title in an unnamed digest that ran: "Amputated Head and Neck Tissue," as well as a sentence in the piece that said, "This study was undertaken to help us try to establish criteria for replacement of accidentally amputated head and neck tissues."

Those careless guillottines!

● Dr. R. J. Bingham of Toledo, Ohio, found this in still another unnamed publication for, he says, family physicians: "Being prepared for severe reactions with resuscitative equipment and trained personnel serve the patient better than useless protesting."

Turns out that it's a putdown not of Young Turks but of unnecessary protesting.

● The occasional oddity of the British and their laws is illustrated in a *British Medical Journal* piece on the Road Safety Act, sent to us by Dr. Austin M. Brues, of the Argonne National Laboratory.

After discussing the fact that anyone who fails the breathalyzer drunkenness test must provide a blood or urine specimen for laboratory testing, *B.M.J.* says: "But the act does not require that the blood sample be taken from any particular part of the body. Shortly after it came into force a Hertfordshire lorry driver was acquitted by a jury of a charge of failing to provide a sample after he had said that a sample could be taken from his penis but nowhere else. The police doctor had told the jury that to have a sample from such a site might well have led to a malpractice suit against him."

Readers are invited to contribute items of 100 words or less to this column. Contributions should be mailed to MEDICAL TRIBUNE, 880 Third Avenue, New York, N.Y., 10022.

CIBA

"Antihypertenacity"

an'ti-hy'per-te-nac'i-ty (än'ti-hī'pēr-tē-nās'ī-tē), n.
The ability of Esidrix (hydrochlorothiazide) to help control hypertension, especially mild hypertension, over a long period of time. This is associated with the gradual, sustained action desirable in long-term therapy. A characteristic also described as "staying power."

Esidrix® has it. (hydrochlorothiazide)

staying power
for long-term therapy in
mild hypertension



Esidrix® (hydrochlorothiazide)

Indications: Edema and hypertension.

Contraindications: Anuria; discontinue drug if renal shutdown occurs for any reason. Progressive hepatic disease may accelerate development of hepatic coma. Do not give to patients with known allergy to thiazides or other sulfonamide-derived drugs.

Warnings: Small bowel stenosis, with or without ulceration, has been associated with use of enteric-coated thiazides with potassium, and with enteric-coated potassium alone. These bowel lesions have caused obstruction, hemorrhage, and perforation surgery was frequently required and deaths have occurred. Available information tends to implicate enteric-coated potassium salts. Therefore, enteric-coated potassium formulations should be used only when dietary supplementation is not practical and discontinued immediately if abdominal pain, distention, nausea, vomiting, or GI bleeding occurs.

Lowering of blood pressure in hypertensive patients may sometimes result in nitrogen retention, and also result in reduced renal blood flow, particularly in those with impaired renal function, if progressive renal insufficiency is observed, discontinuance of drug may be desirable. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects may develop in those with impaired renal function. Dosages should always be carefully titrated. Pay special attention to electrolyte balance. Patients with severe hepatic insufficiency, patients with azotemia and ascites, watch for signs of impending hepatic coma (confusion, drowsiness, tremor) and test for increased potassium concentration, sodium and glucose tolerance; use cautiously in diabetics. Hyperuricemia may occur but is generally reversed by a uricosuric agent.

Thiazides may decrease arterial responsiveness to norepinephrine and increase responsiveness to tubocurarine if possible, withdraw therapy 2 weeks prior to surgery. Hypotensive episodes under anesthesia have been observed. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage. The possibility of sensitivity reactions should be considered in patients with a history of allergy or bronchial asthma.

Usage in Pregnancy

Thiazides should be used with caution in pregnant or lactating patients since this drug crosses the placental barrier and appears in breast milk and may result in fetal hyperbilirubinemia, thrombocytopenia, or altered carbohydrate metabolism. It is therefore possible that the adverse reactions seen in the adult may occur in the newborn.

Precautions: Perform serum potassium, BUN, appropriate intervals during therapy. Watch for clinical signs of fluid or electrolyte imbalance (hypotension, hypochloremia, alkalosis, hypokalemia). Warning signs: dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, GI disturbances. Serum and urine electrolyte determinations are particularly important when patient is vomiting excessively, receiving parenteral fluids, diuretics, or ACTH; during brisk diuresis; in presence of severe cirrhosis. Interference with adequate oral intake of electrolytes may also contribute to hypokalemia. Digitalis may exaggerate metabolic effects of hypokalemia especially with reference to myocardial excitability. (Signs of digitalis intoxication may be produced by formerly tolerated doses of digitalis.) Hypokalemia may be avoided or treated with supplemental potassium or potassium-rich foods. Supplemental potassium is indicated when patient is receiving digitalis, or if less, or if corrected with ammonium chloride (except in those with hepatic or renal disease) and largely prevented by a nonacid salt intake. If dietary restriction is unduly restricted, especially during hot congestive heart failure or renal disease, a low thiazide diet may complicate therapy with thiazides. Transient elevations in plasma calcium may occur in patients taking thiazides, particularly in those with hyperparathyroidism. Pathological changes in the parathyroid gland have been reported in a few patients on prolonged thiazide therapy. Hyperuricemia (or frank gout) may be precipitated in certain patients. Insulin requirements in uncontrolled diabetes may be increased, decreased, or unchanged. Latent diabetes may become manifest during thiazide therapy. If nitrogen retention indicates onset of renal impairment, discontinue drug.

Adverse Reactions

Gastrointestinal: Anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, flatulence, tachygastria, glossitis, pancreatitis, hyperglycemia, vertigo, paresthesias, headache, xanthopsia, sensitivity, rash, urticaria, necrotizing angitis, Stevens-Johnson syndrome, and other hypersensitivity reactions. Hematologic: Hemolytic anemia, leukopenia, agranulocytosis, atypical thrombocytopenia, or thrombotic thrombocytopenia. Cardiovascular: Orthostatic hypotension, syncope, and may be potentiated by alcohol, barbiturates, or narcotics. Musculoskeletal: Muscle weakness, restlessness, myalgia, myositis, or severe, reduce dosage or withdraw therapy.

Dosage: Tablets should be taken with or immediately after meals.

Edema: Initial—50 to 100 mg once or twice daily for several days. Maintenance—25 to 100 mg daily or intermittently. Refractory patients may require up to 150 mg daily.

Hypertension: Initial—Usual dose 75 mg daily. Maintenance—After a week or so, the dose may be adjusted downward to as little as 25 mg or upward to as much as 100 mg daily. In resistant cases, up to 150 mg daily may be required. Combined therapy—When necessary, other antihypertensives may be added gradually and with caution because of the potential effect of this drug. Dosages of ganglionic blockers should be halved.

Supplied: Tablets, 50 mg (yellow, scored) and 25 mg (pink, scored), bottles of 100, 1000 and 5000.

Consult complete literature before use.

CIBA Pharmaceutical Company, Inc., Summit, New Jersey 07901

BEHIND EACH CIBA PRODUCT A TRADITION OF BASIC RESEARCH

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CIBA

Toronto Study On Vitamin C Backs Pauling

Continued from page 1
(ions.) Dr. Anderson's colleagues in the trial were D. B. W. Reid and G. H. Beaton, Ph.D.

Two outstanding, and "quite unexpected," findings emerged from their study, which was reported in the *Canadian Medical Association Journal*.

• Of the 407 volunteers taking 1,000 mg. vitamin C daily, 26 per cent remained free of illness throughout the study, compared with only 18 per cent of the 411 subjects on placebo.

• Furthermore, those in the vitamin group had 30 per cent fewer days of total disability (confinement to the home or absence from work) than those in the placebo group.

The findings of substantially less disability in the vitamin group, the investigators said, "may have important theoretical and practical implications."

"Further studies," they added, "will of course be required to confirm this finding and establish its magnitude more precisely, but the high level of statistical significance associated with it encourages us to believe that it is likely to be a real effect rather than a statistical artifact."

Because of their initial skepticism of Dr. Pauling's claims, they said, they therefore sought to enroll a large number of subjects to "avoid an indecisive negative result." Furthermore, the subjects were instructed to increase their intake to 4,000 mg./day at the onset of cold symptoms, in order to comply with Dr. Pauling's recommendations. Thus, they noted, they added "a therapeutic feature to an essentially prophylactic trial." In addition, as opposed to previously reported short-term studies, they designed their trial to last for several months.

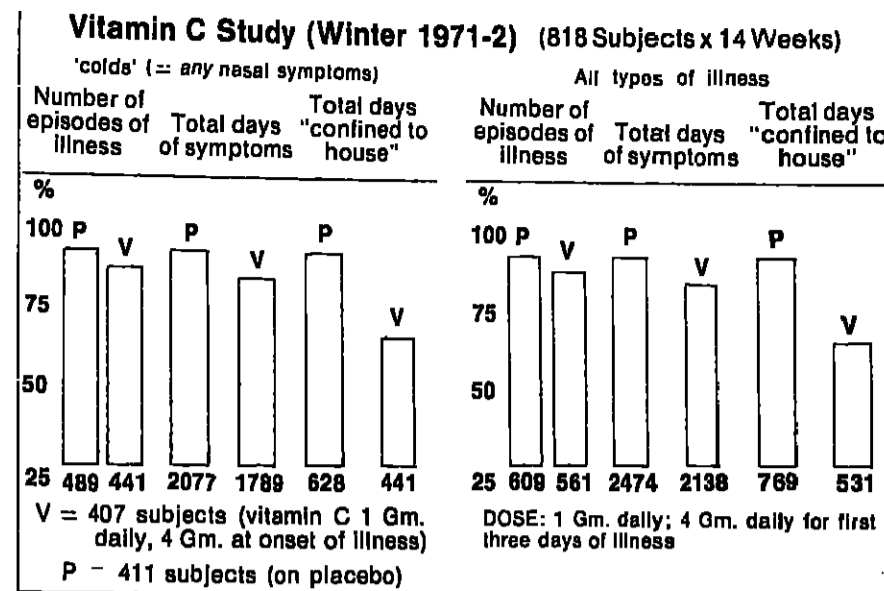
Only subjects who normally experience at least one cold in the January-March period (the period in which the trial was to be conducted) were admitted to the program. The two groups of subjects, vitamin and placebo, were found when the code was broken to be remarkably closely matched as to age, sex, occupation (student or other), smoking habits, number of colds normally, the frequency that they were in crowds, and ingestion of other vitamins and fruit juices.

The subjects turned in a calendar-type record sheet each month indicating for each day whether they were sick or well, the number of tablets taken (the vitamins and placebo were identical in appearance and taste), and on days of illness the sites of symptoms (nose, throat, and chest), the presence of malaise or chills, and, if possible, temperature.

The 818 subjects who were the basis of the study were in the program for at least two months and presented complete personal and sickness records for analysis. For the vitamin group, the mean number of days in the study was 103.2; for the placebo subjects, it was 101.9.

It was found that the mean number of episodes of illness was 7 per cent lower and the mean duration of symptoms (days of symptoms per episode) 5 per cent less in the vitamin group than in the placebo group, but the investigators said the differences were not statistically significant.

While generalized constitutional symptoms—severe malaise, chills, and fever—



appeared markedly less frequent in the vitamin subjects than in the placebo group, it was found that local symptoms (referable to nose, throat, and chest) showed less striking differences. The reduction in disability in the vitamin group, the investigators said, appeared to be due to the lower incidence among them of constitutional symptoms.

It is necessary, the investigators said, "to establish the most appropriate dosage levels, the relative importance of the prophylactic and therapeutic features, and the safety of prolonged ingestion of large doses of ascorbic acid or its salts."

These are questions that trials planned for this winter will seek to answer, Dr. Anderson told MEDICAL TRIBUNE.

They expect to study nine groups of 400 subjects each, he said. They will examine the effects of different dosages and different dosage schedules. The daily dose schedule will range from 250 mg. to 2 Gm. The dosages at onset of cold symptoms will range from 1 to 8 Gm.

The subjects will remain on their regimen for three months, Dr. Anderson said, and during the fourth month they will be off the regimen but will be questioned to

"determine whether there is any rebound effect in those who were on high doses of vitamin C—that is, where they have perhaps become dependent on the vitamin."

Pauling Gives Concept Of a Valid Trial

In an exclusive interview last January, Dr. Linus Pauling outlined to MEDICAL TRIBUNE his concept of a "scientifically valid trial" of his hypothesis.

"The best test [of the protective effect of vitamin C]," he said, "would be one that entails exposure to cold infection, using several hundred subjects and higher doses of ascorbic acid."

The Nobelist, who said that he was willing to have his hypothesis stand or fall by the results of such a trial, had criticized some earlier studies because the vitamin C dose was too small and a potent viral challenge had been employed, instead of exposing patients to the natural disease.

He predicted that a study design based on his views would give statistically significant evidence that ascorbic acid may be protective against colds.

Pauling's Critics Advised To Read Work, Study Trials

Medical Tribune World Service

OTTAWA—Critics of Linus Pauling's views on vitamin C and the common cold would do well both to read his work thoroughly and to study the available trials on the effects of ascorbic acid in reducing the incidence and severity of the ailment in subjects exposed to the cold virus in the usual way, Dr. R. M. Preshaw, of the Department of Physiology at the University of Toronto, suggested in an editorial in the *Canadian Medical Association Journal*.

When Dr. Pauling's *Vitamin C and the Common Cold* appeared last year in paperback, he noted, "it was treated rather harshly by most of the reviewers in the medical press."

"Secure in the knowledge that vitamin C had been unsuccessfully put forward as therapy more than two decades ago for everything from cervical erosions to automobile accidents, the brave critics petulantly complained about the scarcity of experimental support for Pauling's theories," Dr. Preshaw wrote.

Paraphrasing, he remarked that "the good professor struck back with several devastating replies to reviewers whose comments had contained more fancy than fact."

Those who "took time out from the fray" to read Dr. Pauling's paperback thoroughly, he said, "were impressed by a lucid and reasonable argument, contained in a monograph which might serve as a model for elementary instruction in scientific matters."

Dr. Pauling had relied, Dr. Preshaw pointed out, on four independent double-blind studies on the effects of regular in-

gestion of ascorbic acid in amounts greater than 100 mg. daily, in comparison with a placebo, in reducing the incidence and morbidity of the common cold.

The latest study, by Anderson, Reid, and Beaton (see page 1), Dr. Preshaw noted, is a fifth randomized clinical trial, one using the larger dosages recommended by Dr. Pauling. A significant finding, he emphasized, was the difference in the number of subjects who remained free of illness throughout the period of study—18 per cent of the placebo group against 26 per cent of those taking ascorbic acid.

Small-Dose Trials Published

Dr. Preshaw observed that several "acceptable" trials of much smaller doses have been published. "The results," he commented, "may be interpreted as scoring two in favor and three against the proposal that ascorbic acid in these doses is useful therapy for colds." The failure of vitamin C (3 Gm. per day) to alleviate the miseries of the common cold in a trial by a group of general practitioners in England, he continued, "would seem to tip the scales further against the value of ascorbic acid."

But the study by G. Ritzel, conducted at a ski school in Switzerland, and now the study by Dr. T. W. Anderson and his colleagues, indicating that larger doses are of value in the therapy of upper respiratory infections, "return the scale to balance."

Furthermore, he added, Dr. Anderson's group reported "that subjects receiving ascorbic acid were confined to the house less than persons taking the placebo."

Microbiologist Throws Light On Flu Vaccine

Medical Tribune Report

NEW YORK—In order to throw more light on the continuing controversy over the influenza vaccine, the most promising new lines of research into providing immunization, and the degree of vulnerability in the United States in the case of an influenza outbreak this winter, MEDICAL TRIBUNE interviewed Dr. Edwin T. Kilbourne, Professor of Microbiology and chairman of the department at Mount Sinai School of Medicine. Dr. Kilbourne is a leading researcher in the development of the current influenza vaccine.

Could you explain what "recombination" involves?

All influenza A viruses—and these are the ones we are chiefly concerned with as far as causing disease in man—can participate in a genetic interchange. "Recombination" represents this genetic interaction between related but somewhat dissimilar influenza viruses. Induced in the laboratory, recombination takes advantage of this genetic liability of the virus, in order to harness it for human purposes; instead of empirically selecting viral strains for use in a vaccine, we try to tailor-make the strains we want. Since the influenza virus keeps mutating (the magnitude of which is a characteristic in contrast to all other infectious diseases), we have the unique problem of having to create, every few years, a new vaccine that antigenically matches the influenza virus each time it changes. Recombination thus has involved combining the specific antigenicity of a new strain with the ideal growth characteristics of another strain, which makes production of a vaccine economically feasible.

The actual mechanism of recombination is quite simple. It's brought about by the simultaneous infection of chick embryos or tissue cultures with the viruses we wish to use as parents, and from the mixed yield of such an infection we screen out by various selective methods the strain that meets the desired specifications.

I'd like to point out that most of the vaccines currently used in this country involve the use of such a recombined virus that we developed, the X-31. I believe that, currently, four out of the six American manufacturers are using the X-31 (Hong Kong) strain as their vaccine.

Does the new "England strain" recently isolated represent a major change in antigenicity from the Hong Kong strain, and thus does it threaten the United States this winter?

Although this is the biggest change we've had in this post-Hong Kong period, it still could not be called a "major change." It's nothing like the change, for example, from Asian to Hong Kong; it is enough of a change, however, to probably compromise existing immunity to some extent. It therefore will be a threat to the United States, particularly to those parts of the country that have not had recent experience with the Hong Kong strain. I would suspect that the England strain is close enough to the original Hong Kong strain so that vaccination with present vaccines would probably be effective, although somewhat less effective than it would be against the Hong Kong strain. The present vaccine, which is the Hong Kong variety, is definitely worth using.

Conclusion in Next Issue of Medical Tribune



DR. KILBOURNE